

RAW SEQUENCE LISTING

**The Biotechnology Systems Branch of the Scientific and Technical
Information Center (STIC) no errors detected.**

Application Serial Number: 10/820,067A
Source: IFWO
Date Processed by STIC: 5/26/05

ENTERED



IFWO

RAW SEQUENCE LISTING

DATE: 05/26/2005

PATENT APPLICATION: US/10/820,067A

TIME: 10:02:50

Input Set : D:\SEQLIST 8449-406 (substitute).TXT

Output Set: N:\CRF4\05262005\J820067A.raw

4 <110> APPLICANT: Fletchner, J.
 5 Prince-Cohane, K.
 6 Mehta, S.
 7 Slusarewicz, P.
 8 Andjelic, S.
 9 Barber, B.
 11 <120> TITLE OF INVENTION: IMPROVED HEAT SHOCK PROTEIN-BASED
 12 VACCINES AND IMMUNOTHERAPIES
 15 <130> FILE REFERENCE: 8449-406-999
 17 <140> CURRENT APPLICATION NUMBER: 10/820,067A
 18 <141> CURRENT FILING DATE: 2004-04-08
 20 <150> PRIOR APPLICATION NUMBER: 60/462,469
 21 <151> PRIOR FILING DATE: 2003-04-11
 23 <150> PRIOR APPLICATION NUMBER: 60/463,746
 24 <151> PRIOR FILING DATE: 2003-04-18
 26 <150> PRIOR APPLICATION NUMBER: 60/503,417
 27 <151> PRIOR FILING DATE: 2003-09-16
 29 <160> NUMBER OF SEQ ID NOS: 926
 31 <170> SOFTWARE: FastSEQ for Windows Version 4.0
 33 <210> SEQ ID NO: 1
 34 <211> LENGTH: 4
 35 <212> TYPE: PRT
 36 <213> ORGANISM: Malaria
 38 <400> SEQUENCE: 1
 39 Asn Ala Asn Pro
 40 1
 43 <210> SEQ ID NO: 2
 44 <211> LENGTH: 9
 45 <212> TYPE: PRT
 46 <213> ORGANISM: Unknown
 48 <220> FEATURE:
 49 <223> OTHER INFORMATION: HLA-A2 peptide binding motif
 51 <220> FEATURE:
 52 <221> NAME/KEY: VARIANT
 53 <222> LOCATION: 2
 54 <223> OTHER INFORMATION: Xaa = Leu or Met
 56 <220> FEATURE:
 57 <221> NAME/KEY: VARIANT
 58 <222> LOCATION: 6
 59 <223> OTHER INFORMATION: Xaa = Val or Ile or Leu or Thr
 61 <220> FEATURE:
 62 <221> NAME/KEY: VARIANT
 63 <222> LOCATION: 9

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64 <223> OTHER INFORMATION: Xaa = Val or Leu
66 <220> FEATURE:
67 <221> NAME/KEY: VARIANT
68 <222> LOCATION: 1, 3, 4, 5, 7, 8
69 <223> OTHER INFORMATION: Xaa = any amino acid
71 <400> SEQUENCE: 2
W--> 72 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
73 1 5
76 <210> SEQ ID NO: 3
77 <211> LENGTH: 9
78 <212> TYPE: PRT
79 <213> ORGANISM: Unknown
81 <220> FEATURE:
82 <223> OTHER INFORMATION: HLA-A2 peptide binding motif
84 <220> FEATURE:
85 <221> NAME/KEY: VARIANT
86 <222> LOCATION: 2
87 <223> OTHER INFORMATION: Xaa = Leu or Met
89 <220> FEATURE:
90 <221> NAME/KEY: VARIANT
91 <222> LOCATION: 1, 3, 4, 5, 6, 7, 8
92 <223> OTHER INFORMATION: Xaa = any amino acid
94 <400> SEQUENCE: 3
W--> 95 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Val
96 1 5
99 <210> SEQ ID NO: 4
100 <211> LENGTH: 8
101 <212> TYPE: PRT
102 <213> ORGANISM: Unknown
104 <220> FEATURE:
105 <223> OTHER INFORMATION: HLA-A2 peptide binding motif
107 <220> FEATURE:
108 <221> NAME/KEY: VARIANT
109 <222> LOCATION: 2
110 <223> OTHER INFORMATION: Xaa = Val or Gln
112 <220> FEATURE:
113 <221> NAME/KEY: VARIANT
114 <222> LOCATION: 1, 3, 4, 5, 6, 7
115 <223> OTHER INFORMATION: Xaa = any amino acid
117 <400> SEQUENCE: 4
W--> 118 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Leu
119 1 5
122 <210> SEQ ID NO: 5
123 <211> LENGTH: 5
124 <212> TYPE: PRT
125 <213> ORGANISM: Unknown
127 <220> FEATURE:
128 <223> OTHER INFORMATION: HLA-DR peptide binding motif
130 <400> SEQUENCE: 5

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131 Gln Lys Arg Ala Ala

132 1 5

135 <210> SEQ ID NO: 6

136 <211> LENGTH: 5

137 <212> TYPE: PRT

138 <213> ORGANISM: Unknown

140 <220> FEATURE:

141 <223> OTHER INFORMATION: HLA-DR peptide binding motif

143 <400> SEQUENCE: 6

144 Arg Arg Arg Ala Ala

145 1 5

148 <210> SEQ ID NO: 7

149 <211> LENGTH: 7

150 <212> TYPE: PRT

151 <213> ORGANISM: Unknown

153 <220> FEATURE:

154 <223> OTHER INFORMATION: motif in heptamiric region recognized by heat

155 shock protein

157 <220> FEATURE:

158 <221> NAME/KEY: VARIANT

159 <222> LOCATION: 2

160 <223> OTHER INFORMATION: Xaa = Trp or any amino acid

162 <220> FEATURE:

163 <221> NAME/KEY: VARIANT

164 <222> LOCATION: 1, 3, 5, 7

165 <223> OTHER INFORMATION: Xaa = hydrophobic amino acid residues

167 <220> FEATURE:

168 <221> NAME/KEY: VARIANT

169 <222> LOCATION: 4, 6

170 <223> OTHER INFORMATION: Xaa = any amino acid

172 <400> SEQUENCE: 7

W--> 173 Xaa Xaa Xaa Xaa Xaa Xaa Xaa

174 1 5

177 <210> SEQ ID NO: 8

178 <211> LENGTH: 7

179 <212> TYPE: PRT

180 <213> ORGANISM: Unknown

182 <220> FEATURE:

183 <223> OTHER INFORMATION: motif in heptamiric region recognized by heat

184 shock protein

186 <220> FEATURE:

187 <221> NAME/KEY: VARIANT

188 <222> LOCATION: 2

189 <223> OTHER INFORMATION: Xaa = Trp or any amino acid

191 <220> FEATURE:

192 <221> NAME/KEY: VARIANT

193 <222> LOCATION: 1, 3, 5, 7

194 <223> OTHER INFORMATION: Xaa = hydrophobic amino acid residue, particularly

195 tryptophan, leucine or phenylalanine

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197 <220> FEATURE:
198 <221> NAME/KEY: VARIANT
199 <222> LOCATION: 4, 6
200 <223> OTHER INFORMATION: Xaa = any amino acid
202 <400> SEQUENCE: 8
W--> 203 Xaa Xaa Xaa Xaa Xaa Xaa Xaa
204 1 5
207 <210> SEQ ID NO: 9
208 <211> LENGTH: 4
209 <212> TYPE: PRT
210 <213> ORGANISM: Artificial Sequence
212 <220> FEATURE:
213 <223> OTHER INFORMATION: peptide linker in between antigenic domain and
214 heat shock binding domain of hybrid antigen
217 <220> FEATURE:
218 <221> NAME/KEY: VARIANT
219 <222> LOCATION: 1
220 <223> OTHER INFORMATION: Xaa = Ala/Ser/Val/Lys/Glu/Gly/Leu
222 <220> FEATURE:
223 <223> OTHER INFORMATION: In the order of preference, with Ala the most preferred
225 <220> FEATURE:
226 <221> NAME/KEY: VARIANT
227 <222> LOCATION: 2
228 <223> OTHER INFORMATION: Xaa = Lys/Val/Glu
230 <220> FEATURE:
231 <223> OTHER INFORMATION: In the order of preference, with Lys the most preferred
233 <220> FEATURE:
234 <221> NAME/KEY: VARIANT
235 <222> LOCATION: 3
236 <223> OTHER INFORMATION: Xaa = Val/Ser/Phe/Thr/Lys/Ala/Glu
238 <220> FEATURE:
239 <223> OTHER INFORMATION: In the order of preference, with Val the most preferred
241 <400> SEQUENCE: 9
W--> 242 Xaa Xaa Xaa Leu
243 1
246 <210> SEQ ID NO: 10
247 <211> LENGTH: 10
248 <212> TYPE: PRT
249 <213> ORGANISM: Adeno Virus
251 <400> SEQUENCE: 10
252 Ser Gly Pro Ser Asn Thr Pro Pro Glu Ile
253 1 5 10
256 <210> SEQ ID NO: 11
257 <211> LENGTH: 11
258 <212> TYPE: PRT
259 <213> ORGANISM: Lymphocytic Choriomeningitis Virus (LCMV)
261 <400> SEQUENCE: 11
262 Ser Gly Val Glu Asn Pro Gly Gly Tyr Cys Leu
263 1 5 10

```

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Input Set : D:\SEQLIST 8449-406 (substitute).TXT

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266 <210> SEQ ID NO: 12
267 <211> LENGTH: 10
268 <212> TYPE: PRT
269 <213> ORGANISM: Lymphocytic Choriomeningitis Virus (LCMV)
271 <400> SEQUENCE: 12
272 Lys Ala Val Tyr Asn Phe Ala Thr Cys Gly
273   1           5           10
276 <210> SEQ ID NO: 13
277 <211> LENGTH: 9
278 <212> TYPE: PRT
279 <213> ORGANISM: Lymphocytic Choriomeningitis Virus (LCMV)
281 <400> SEQUENCE: 13
282 Arg Pro Gln Ala Ser Gly Val Tyr Met
283   1           5
286 <210> SEQ ID NO: 14
287 <211> LENGTH: 9
288 <212> TYPE: PRT
289 <213> ORGANISM: Lymphocytic Choriomeningitis Virus (LCMV)
291 <400> SEQUENCE: 14
292 Phe Gln Pro Gln Asn Gly Gln Phe Ile
293   1           5
296 <210> SEQ ID NO: 15
297 <211> LENGTH: 9
298 <212> TYPE: PRT
299 <213> ORGANISM: Influenza Virus
301 <400> SEQUENCE: 15
302 Ile Glu Gly Gly Trp Thr Gly Met Ile
303   1           5
306 <210> SEQ ID NO: 16
307 <211> LENGTH: 10
308 <212> TYPE: PRT
309 <213> ORGANISM: Influenza Virus
311 <400> SEQUENCE: 16
312 Thr Tyr Val Ser Val Ser Thr Ser Thr Leu
313   1           5           10
316 <210> SEQ ID NO: 17
317 <211> LENGTH: 8
318 <212> TYPE: PRT
319 <213> ORGANISM: Influenza Virus
321 <400> SEQUENCE: 17
322 Phe Glu Ala Asn Gly Asn Leu Ile
323   1           5
326 <210> SEQ ID NO: 18
327 <211> LENGTH: 9
328 <212> TYPE: PRT
329 <213> ORGANISM: Influenza Virus
331 <400> SEQUENCE: 18
332 Ile Tyr Ser Thr Val Ala Ser Ser Leu
333   1           5

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RAW SEQUENCE LISTING ERROR SUMMARY
 PATENT APPLICATION: US/10/820,067A

DATE: 05/26/2005
 TIME: 10:02:51

Input Set : D:\SEQLIST 8449-406 (substitute).TXT
 Output Set: N:\CRF4\05262005\J820067A.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:2; Xaa Pos. ~~1,2,3,4,5,6,7,8,9~~
 Seq#:3; Xaa Pos. ~~1,2,3,4,5,6,7,8~~
 Seq#:4; Xaa Pos. ~~1,2,3,4,5,6,7~~
 Seq#:7; Xaa Pos. ~~1,2,3,4,5,6,7~~
 Seq#:8; Xaa Pos. ~~1,2,3,4,5,6,7~~
 Seq#:9; Xaa Pos. ~~1,2,3~~
 Seq#:401; Xaa Pos. 7
 Seq#:402; Xaa Pos. 3
 Seq#:407; Xaa Pos. 2,6
 Seq#:454; Xaa Pos. 5
 Seq#:564; Xaa Pos. 7
 Seq#:565; Xaa Pos. 3
 Seq#:570; Xaa Pos. 2,6
 Seq#:617; Xaa Pos. 5
 Seq#:805; Xaa Pos. 7
 Seq#:806; Xaa Pos. 3
 Seq#:811; Xaa Pos. 2,6
 Seq#:858; Xaa Pos. 5

VERIFICATION SUMMARY

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TIME: 10:02:51

Input Set : D:\SEQLIST 8449-406 (substitute).TXT

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L:72 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:0
L:95 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:0
L:118 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:0
L:173 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7 after pos.:0
L:203 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:0
L:242 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:0
L:520 M:283 W: Missing Blank Line separator, <400> field identifier
L:4976 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:401 after pos.:0
L:4994 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:402 after pos.:0
L:5064 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:407 after pos.:0
L:5680 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:454 after pos.:0
L:7115 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:564 after pos.:0
L:7133 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:565 after pos.:0
L:7203 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:570 after pos.:0
L:7819 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:617 after pos.:0
L:10437 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:805 after pos.:0
L:10456 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:806 after pos.:0
L:10531 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:811 after pos.:0
L:11194 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:858 after pos.:0